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19. ABSTRACT (Continue on reverse if necessary and identify by block number) The U.S. Army Armament Research, Development and Engineering Center (ARDEC), was requested to verify that a MIL-B-2427 and PPP-B-621 wood box meets or exceeds the requirements of the United Nations, "Recommendation on the Transport of Dangerous Goods." The box was tested at the U.S. Army Defense Ammunition Center and School (USADACS) by performing a drop test and stacking test. There were five drops performed at a height of 48 inches; flat on top, flat on bottom, on a long side, a short side, and a corner. The stacking test was to simulate a load on the bottom box of a stacking height of 16 feet. The container met the requirements of a "4C1" container of the Performance Oriented Packaging requirement. Keywords:			
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Report Number: DODPOPHM/AYA/TR89002
Title: Performance Oriented Packaging Test of 4Cl Wood Box
Container: Box, Ammunition Packing: Wood, Nailed
UN Code: 4Cl
Specification Number: MIL-B-2427, Type 1, Class 1
Dimensions: O.D. Inches 43.75 x 14.25 x 8.75
Closure: Metal Banding (3)
Gross Weight: 146 lbs.
Contents: Inert 105mm ammunition

Test Performed: Packaging Group II

1. Drop Tests - 1.2 meters

Bottom, Top, Long side, Short side, Corner (5 drops).

Contents of inner receptacles must be retained to pass.

2. Stacking Test

Compression top load equivalent to the weight of a 3 meter stack of like product must remain stable after 24 hrs. to pass.

Test Results:

1. Drop Test - Some minor separation of the nailed boards. Contents undamaged.
2. Stacking Test - No damage after 24 hrs. of top load of 3,010 lbs.
3. Passed (UN criteria).

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Container: Box, Wood, Nailed and Lock - Corners
UN Code: 4Cl
Specification Number: PPP-B-621, Style 4 and 4 1/2
Dimensions: I.D. Inches 12.81 x 12.10 x 7.56
Closure: Nailed and Metal Strapped
Gross Weight: 98.7 lbs.
Contents: Lead Shot

Test Performed: Packaging Group II

1. Drop Tests - 1.2 meters
Bottom, Top, Long side, Short side, Corner (5 drops).
Contents of inner receptacles must be retained to pass.
2. Stacking Test
Compression top load equivalent to the weight of a 3 meter stack
of like product must remain stable after 24 hrs. to pass.

Test Results:

1. Drop Test - Some minor splits occurred along nailing lines. Minor corner crushing observed on wood box. Contents undamaged.
2. Stacking Test - No damage after 24 hrs. of top load of 1,450 lbs.
3. Passed (UN criteria).